

Patent claims

1. Method for communicating in a radio communication system which includes a first and a second radio access point (AP-A, AP-B) and a multiplicity of radio stations (MS1, MS2, MS3, MS4), in which the first radio access point (AP-A) broadcasts signals (PLS) with increasing transmission power, terminates the increases in the transmission power as a result of a message (PAS1) from one or more radio station(s) (MS3) located within the radio coverage area (FZB) of the second radio access point (AP-B), where the message (PAS1) relates to one or more signal(s) (PLR) from the first radio access point (AP-A) and/or one or more signal(s) (RR) from a radio station (MS1, MS2) located within the radio coverage area (FZA1, FZA2) of the first radio access point (AP-A).
2. Method in accordance with claim 1, in which the message (PAS1) from the one or more radio station(s) (MS3) located within the radio coverage area (FZB) of the second radio access point (AP-B) includes content from and/or a result of a measurement on one or more signal(s) (PLS) from the first radio access point (AP-A) and/or content from and/or a result of a measurement on one or more signal(s) (RR) from a radio station (MS1, MS2) located within the radio coverage area (FZA1, FZA2) of the first radio access point (AP-A).
3. Method in accordance with claim 1 or 2, by which the first radio access point (AP-A) receives from a multitude of radio stations (MS1, MS2) a reply (RR) to each of the signals (PLS) broadcast with increasing transmission power by the first radio access point (AP-A).

4. Method in accordance with one of claims 1 to 3, by which the one or more radio station(s) (MS3) located within the radio coverage area (FZB) of the second radio access point (AP-B) sends the message (PAS1) if the received power of the one or more signals (PLS, RR) from the first radio access point (AP-A) and/or from the radio station (MS1, MS2) located within the radio coverage area (FZA1, FZA2) of the first radio access point (AP-A) lies above a threshold value.
5. Method in accordance with one of the claims 1 to 4, by which the signals (PLS) broadcast with increasing transmission power by the first radio access point (AP-A) contain items of data identifying the first radio access point (AP-A) and the transmission power used.
6. Method in accordance with one of the claims 1 to 5, by which during the broadcasting of the signals (PLS) with increasing transmission power by the first radio access point (AP-A), no messages are transmitted by the second radio access point (AP-B) to the radio stations (MS3) located within the radio coverage area (FZB) of the second radio access point (AP-B).
7. Method in accordance with one of the claims 1 to 6, by which the one or more radio station(s) (MS3) located within the radio coverage area (FZB) of the second radio access point (AP-B) transmits the message (PAS1) to a network-side

device (BS) which differs from the first radio access point (AP-A).

8. Method in accordance with one of the claims 1 to 7, by which
the one or more radio station(s) (MS3) located within the radio coverage area (FZB) of the second radio access point (AP-B) is instructed by a message (PMR1) to detect the receipt of signals (PLS, RR) from the first radio access point (AP-A) and/or from radio stations (MS1, MS2) located within the radio coverage area (FZA1, FZA2) of the first radio access point (AP-A).
9. Method in accordance with one of the claims 1 to 8, by which
the first radio access point (AP-A) uses a message (PAR) to request from a network-side device (BS) permission to broadcast signals (PLS) with increasing transmission power.
10. Method in accordance with one of the claims 1 to 9, by which
a network-side device (BS) instructs the first radio access point (AP-A) by means of a message (PAA) to broadcast the signals (PLS) with increasing transmission power.
11. Method in accordance with one of the claims 1 to 10, by which
a network-side device (BS) instructs the first radio access point (AP-A) by means of a message (PAS2) to terminate the increases in transmission power.
12. Method in accordance with one of the claims 1 to 11, by which

a network-side device (BS) informs the first radio access point (AP-A), by means of a message (PAS2), what transmission power the first radio access point (AP-A) should use after terminating the increases in transmission power.

13. Method in accordance with one of the claims 1 to 12, by which
the first radio access point (AP-A) communicates with the radio stations (MS1, MS2) located within the radio coverage area (FZA1, FZA2) of the first radio access point (AP-A), and the second radio access point (AP-B) with the radio stations (MS3) located within the radio coverage area (FZB) of the second radio access point (AP-B), using a first radio frequency.
14. Method in accordance with one of the claims 1 to 13, by which
messages are transmitted between radio stations (MS4), located outside the radio coverage areas (FZA1, FZA2) of the first radio access point (AP-A) and (FZB) of the second radio access point (AP-B), and the first radio access point (AP-A) and/or the second radio access point (AP-B) by the forwarding of the messages by radio stations (MS1, MS2, MS3).
15. Method in accordance with claim 14, by which
a second radio frequency is used for the purpose of forwarding messages between radio stations (MS1, MS2, MS3, MS4).
16. Radio access point (AP-A) for communicating in a radio communication system, with
facilities (CONTROL, A) for broadcasting signals (PLS) with

increasing transmission power,
facilities (RECEIVE_AP) for receiving a message (PAS1),
transmitted by a radio station (MS3) located within the
radio coverage area (FZB) of another radio access point
(AP-B), concerning one or more signal(s) from the radio
access point (AP-A), or facilities (RECEIVE_AP) for
receiving a message (PAS2) transmitted by a network-side
device (BS) with the instruction to terminate the increases
in the transmission power, with facilities (EVALUATE) for
terminating the increases in the transmission power as a
result of the receipt of the message (PAS1) transmitted by
the radio station (MS3) located within the radio coverage
area (FZB) of the other radio access point (AP-B), or as a
result of the receipt of the message (PAS2) transmitted by
the network-side device (BS).

17. Network-side device (BS) for communicating in a radio
communication system,
with facilities (UP/STOP, ATX) for transmitting a message
(PAA) to a first radio access point (AP-A) with the
instruction to broadcast signals (PLS) with increasing
transmission power,
with facilities for receiving (ATX_BS, RECEIVE_BS) a
message (PAS1) from a radio station (MS3) located within
the radio coverage area (FZB) of second radio access point
(AP-B) concerning one or more signal(s) (PLS) from the
first radio access point (AP-A) and/or one or more
signal(s) (RR) from a radio station (MS1, MS2) located
within the radio coverage area (FZA1, FZA2) of the first
radio access point (AP-A)
with facilities (UP/STOP, ATX) for transmitting a message
(PAS2), on receipt of the message from the radio station
(MS3) located within the radio coverage area (FZB) of the

second radio access point (AP-B), back to the first radio access point (AP-A) with the instruction to terminate the increases in transmission power.

18. Radio station (MS3) for communicating in a radio communication system
with facilities (MEASURE) for detecting the receipt of signals (PLS) from a first radio access point (AP-A), which differs from the radio access point (AP-B) within whose radio coverage area (FZB) the radio station (MS3) is currently located, and/or of signals (RR) from radio stations (MS1, MS2) located within the radio coverage area (FZA1, FZA2) of the first radio access point (AP-A),
with facilities (ANALYZE) for determining the transmission powers of the signals (RR) which have been detected,
with facilities (MESSAGE, ATX_MS) for transmitting a message (PAS1), concerning the transmission power of one or more detected signal(s) (PLS) from the first radio access point (AP-A) and/or of one or more signal(s) (RR) which has been detected from a radio station (MS1, MS2) located within the radio coverage area (FZA1, FZA2) of the first radio access point (AP-A), to a network-side device (BS) and/or to the radio access point (AP-B) within whose radio coverage area (FZB) the radio station (MS3) is currently located.

